? logon

```
*** It is now 2009/10/26 09:56:26 ***
(Dialog time 2009/10/26 08:56:26)
```

9 b 411

```
26oct09 07:56:41 User276702 Session D262.1
$0.00 0.247 DialUnits File415
$0.00 Estimated cost File415
$0.06 Estimated cost this search
$0.06 Estimated total session cost 0.247 DialUnits
File 41:DIALINDEX(R)
(c) 2009 Dialog

*** DIALINDEX search results display in an abbreviated ***
*** format unless you enter the SET DETAIL ON command. ***
```

? sf all

```
You have 514 files in your file list. (To see banners, use SHOW FILES command)
```

?s ((workflow? or process?? or service? or load?) (n2) (balanc?? or distribut??)) and (service () level () (goal? or objective?)) and (omit?? or remov?? or skip?? or delet??) (n2) (activit?? or step? or task? or process??) not py>2003

Processing Processing

Processing Processing

Processing Processing

Processing

Processing

Processing

Processing

Processing

Processing Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing Processing

Processing Processing

Processing

Processing

Processing

Processing

Processing

Processing Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing Processing

Processing Processing

Processing

Processing

Processing

Processing

Processing

Processing Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing

```
Processing
Your SELECT statement is:
   S ((WORKFLOW? OR PROCESS?? OR SERVICE? OR LOAD?) (N2) (BALANC?? OR
DISTRIBUT ??)) AND (SERVICE () LEVEL () (GOAL? OR OBJECTIVE?)) AND
(OMIT??
OR REMOV?? OR SKIP?? OR DELET??) (N2) (ACTIVIT?? OR STEP? OR TASK? OR
PROCESS??) NOT PY>2003
            Items File
Processing
Processing
       Examined 50 files
       Examined 100 files
Processing
       Examined 150 files
Processing
Processing
```

```
Examined 200 files
Processing
Processing
Processing
Processing
               6 349: PCT FULLTEXT_1979-2009/UB=20091022|UT=20091015
Processing
       Examined 250 files
       Examined 300 files
       Examined 350 files
       Examined 400 files
Processing
Processing
Processing
Processing
Processing
               3 654: US PAT.FULL, 1976-2009/OCT 22
       Examined 450 files
       Examined 500 files
Processing
   2 files have one or more items; file list includes 514 files.
```

9 b bits

One or more terms were invalid in 67 files.

```
$319.32 Estimated cost File411
$9.06 INTERNET
$328.38 Estimated cost this search
$328.44 Estimated total session cost 108.858 DialUnits

SYSTEM:OS - DIALOG OneSearch
File 349:PCT FULLTEXT 1979-2009/UB-20091022|UT-20091015
(c) 2009 WIPO/Thomson
File 654:US PAT.FULL. 1976-2009/OCT 22
(c) Format only 2009 Dialog

Set Items Description
```

--- ---- Description

?s ((workflow? or process?? or service? or load?) (n2) (balanc?? or distribut??)) and (service () level () (goal? or objective?)) and (omit?? or remov?? or skip?? or delet??) (n2) (activit?? or step? or task? or process??) not py>2003

Processing Processing

Processing

```
Processing
           26842 WORKFLOW?
         4841394 PROCESS??
         1058512 SERVICE?
         2285761 LOAD?
          849220 BALANC??
         1264130 DISTRIBUT??
          101503 (((WORKFLOW? OR PROCESS??) OR SERVICE?) OR
                  LOAD?) (2N) (BALANC?? OR DISTRIBUT??)
          884732 SERVICE
         3067159 LEVEL
          371041 GOAL?
          763825 OBJECTIVE?
             495 SERVICE(W) LEVEL(W) (GOAL? OR OBJECTIVE?)
           87706 OMTT??
         3686591 REMOV??
           73379 SKIP??
          353088 DELET??
         1064434 ACTIVIT??
         4318545 STEP?
          623386 TASK?
         4841394 PROCESS??
                 (((OMIT?? OR REMOV??) OR SKIP??) OR
          315426
                  DELET ??) (2N) (((ACTIVIT?? OR STEP?) OR TASK?) OR
                  PROCESS??)
         3610746 PY>2003
      S1
              9 ((WORKFLOW? OR PROCESS?? OR SERVICE? OR LOAD?) (N2)
                  (BALANC?? OR DISTRIBUT??)) AND (SERVICE () LEVEL ()
                  (GOAL? OR OBJECTIVE?)) AND (OMIT?? OR REMOV?? OR
SKIP??
                  OR DELET??) (N2) (ACTIVIT?? OR STEP? OR TASK? OR
                  PROCESS??) NOT PY>2003
```

? rd

>>>Duplicate detection is not supported for File 349.

>>>Duplicate detection is not supported for File 654.

>>>All specified files are unsupported, command ignored.

? t s1/ti/all

1/106/1 (Item 1 from file: 349) DIALOG(R)File 349: PCT FULLTEXT (c) 2009 WIPO/Thomson, All rights reserved.

Country Number Kind Date

1/106/2 (Item 2 from file: 349) DIALOG(R)File 349: PCT FULLTEXT (c) 2009 WIPO/Thomson. All rights reserved.

Country Number Kind Date

1/106/3 (Item 3 from file: 349) DIALOG(R)File 349: PCT FULLTEXT (c) 2009 WIPO/Thomson. All rights reserved.

Country Number Kind Date

1/106/4 (Item 4 from file: 349) DIALOG(R)File 349: PCT FULLTEXT (c) 2009 WIPO/Thomson. All rights reserved.

Country Number Kind Date

1/106/5 (Item 5 from file: 349) DIALOG(R)File 349: PCT FULLTEXT (c) 2009 WIPO/Thomson. All rights reserved.

Country Number Kind Date

1/106/6 (Item 6 from file: 349)

DIALOG(R)File 349: PCT FULLTEXT

(c) 2009 WIPO/Thomson. All rights reserved.

Country Number Kind Date

1/TI/7 (Item 1 from file: 654)

DIALOG(R)File 654: US PAT.FULL.

(c) Format only 2009 Dialog. All rights reserved.

Systems and methods for managing resource utilization in information management environments

1/TI/8 (Item 2 from file: 654)

DIALOG(R)File 654: US PAT.FULL.

(c) Format only 2009 Dialog, All rights reserved.

Monitoring and control engine for multi-tiered service-level

management of distributed web-application servers

1/TI/9 (Item 3 from file: 654)

DIALOG(R)File 654: US PAT.FULL.

(c) Format only 2009 Dialog. All rights reserved.

Systems and methods for resource usage accounting in

information management environments

Dialog eLink: Order File History 1/3,K/8 (Item 2 from file: 654)

DIALOG(R)File 654: US PAT.FULL.

(c) Format only 2009 Dialog. All rights reserved.

_

0005184563 **IMAGE Available

Derwent Accession: 2003-417968

Monitoring and control engine for multi-tiered service-level

management of distributed web-application servers

Inventor: Bradley Stone, INV

Correspondence Address: STUART T AUVINEN, 429 26TH AVENUE, SANTA CRUZ, CA,

_...

95062-5319, US

	Publication					pplication	Filing	
		Number	Kind	Date		Number	Date	
Main Patent	US	20030036886	A1	20030220	US	2001682324		

Fulltext Word Count: 11804
**IMAGE Available

Abstract:

ſ

A web site provides services to uses over the Internet. End-user service - level objectives (SLOs) such as availability and performance

are measured and reported to a SLO agent. User...

Summary of the Invention:

...less than 5%, or a server availability of greater than 99.95%, are

known as service - level objectives (SLO's). These objectives are defined in terms of the end-user service experience, rather...

 $\dots 0008]$ Monitoring products that measure against such $% \left(1\right) =\left(1\right) +\left(1\right) =\left(1\right) +\left(1\right) +\left(1\right) =\left(1\right) +\left(1\right) +\left($

objectives are being developed, such as Hewlett-Packard's Web Transaction Observer. However, when such SLO...

 \dots same CPUs, requiring that CPU usage be intelligently allocated among them all to maximize the $\,$ service - level $\,$ objective .

Description of the Drawings:

 $\dots 0012] FIG.~2$ is a diagram of a service - level - objective (SLO) monitoring and control system for a multi-tier web site...

...7 is a software entity diagram showing policy actions called in response to an availability service - level - objective violation...

...8 is a software entity diagram showing policy actions called in response to a performance service - level - objective violation...

Description of the Invention:

- ...government workers, and even web cam views promoting tourism. E-brokers provide stock quotes, account balances, and trading services
 - . Several back-end databases may be accessed by front-end server applications. Each of these...
- \ldots for better monitoring, diagnosis, and automated control of the various
- software components so that desired service level objectives (SLO's) are met...
- \ldots service and tier, allowing an automated management server to diagnose

problems and relate them to service - level objectives .

[...

- $\dots 0040\,|\text{FIG.}\ 2$ is a diagram of a service level objective (SLO) monitoring and control system for a multi-tier web site. In this greatly
 - simplified...
- ...0041] High-level service level objective (SLO) agent 18 communicates with an administrator/user through user-interface and configuration manager 19. The administrator defines the services and service level objectives using configuration manager 19. These overall objectives are stored in SLO agent 18. When a service level
- objective $% \left(1\right) =\left(1\right) \left(1\right) +\left(1\right) +\left(1\right) \left(1\right) +\left(1\right) +\left$

message that SLO agent...

- \dots SLO agent 18 forwards service information to service agents 27, 37, 47.
- Although the overall service level objectives are kept by SLO agent
 - 18, service agents 27, 37, 47 keep track of service...
- \dots node's failure. Service agent 27 can then take corrective action, such
- as instructing a load balancer to stop sending requests to web server 22. The node can be automatically restarted and...quotes service.
- Another
 SLO, availability could also be associated with the stock quotes
- service.

 The service level objective 's priority relative to other SLO's
- The service level objective 's priority relative to other SLO's allows the SLO agent to adjust resource allocation...
- \dots is a software entity diagram showing policy actions called in response to an availability service level objective violation. SLO
- violation events can be generated by the service agent or by the ${\tt SLO...}$
- ...8 is a software entity diagram showing policy actions called in

response to a performance service - level - objective violation. SLO

- ${\tt violation-performance}$ event 80 is generated by the SLO agent when the ${\tt external...}$
- \dots adjustment may not be able to be performed on those nodes. The ${\tt control}$

engine can skip the action steps and go directly to alarming or trying subsequent policies. Some policies such as a load...

Exemplary or Independent Claim(s):

- A distributed monitor and control engine comprising: a service level - objective (SLO) agent, receiving measurements of an SLO objective for a web service to a web...
- $\dots 10$. A computer-implemented method for monitoring and controlling a web

site to meet a service - level objective (SLO) of a service having multiple tiers of service components, the method comprising:

when a...

- ...computer-usable medium having computer-readable program code means embodied therein for controlling and monitoring service - level objectives , the computer-readable program code means in the computer-program product comprising; network connection means...
- ...first tier means for receiving and partially processing external requests for the service having a service - level objective (SLO), the first tier means having a plurality of first service components each able to...

Non-exemplary or Dependent Claim(s):

...monitor and control engine of claim 8 wherein the service agent comprises a plurality of service agents distributed about the web

site, each service agent for monitoring and controlling a different

tier at...

Dialog eLink: Order File History 1/3,K/7 (Item 1 from file: 654)

DIALOG(R)File 654: US PAT.FULL.

(c) Format only 2009 Dialog. All rights reserved. 0005194072 **IMAGE Available

Derwent Accession: 2003-439499

Systems and methods for managing resource utilization in

information management environments
Inventor: Roger Richter, INV

Chaoxin Qiu, INV Scott Johnson, INV

Correspondence Address: William W. Enders O'KEEFE, EGAN & PETERMAN,

Building C, Suite 200 1101 Capital of Texas Highway South, Austin,

TX, 78746, US

	Publication Number	Kind	Date	Aj	pplication Number	Filing Date
Main Patent 20020405	US 20030046396	A1	20030306	US	2002117028	
CIP	PENDING			US	20013683	20011102
CIP	PENDING			US	2001879810	20010612
CIP	PENDING			US	2001797200	20010301
CIP	PENDING			US	2001947869	20010906
CIP	PENDING			US	2001879810	20010612
CIP	PENDING			US	2001797198	20010301
CIP	PENDING			US	20013728	20011102
Provisional				US	60-353104	20020130
Provisional				US	60-285211	20010420
Provisional				US	60-291073	20010515
Provisional				US	60-246401	20001107
Provisional				US	60-187211	20000303
Provisional				US	60-246373	20001107
Provisional				US	60-187211	20000303
Provisional				US	60-291073	20010515
Provisional				US	60-246445	20001107
Provisional				US	60-285211	20010420

Fulltext Word Count: 72817

**IMAGE Available

Description of the Invention:

 \ldots Thus, communication, command and control information may be provided

between the various peers via the distributed interconnect. In addition, communication from one peer to multiple peers may be implemented through a...

...of content delivery system 1010. Network interface processing engine 1030 may also be employed to load balance among other content delivery processing engines of content delivery system 1010. Both of these features...

 \ldots systems may often be rather large. Processing the entire stack for every

request across the distributed interconnect may significantly impact

performance. As described herein, the protocol stack has been segmented

or...

 \ldots examples being ATM, SONET, or wireless. The physical medium between the

network and the network processor may be copper, optical fiber, wireless, etc...

 \ldots network traffic at intermediate nodes. Consistent with this conventional

application, these processors are designed to process high speed streams of network packets. In conventional operation, a network processor receives a packet ...

... execution of network security policies or protocols. A network processor

could also be used for load balancing. Network processors used in this

manner can be referred to as "network accelerators" ...tasks. A specialized interface 28 may be specially programmed to optimize the

between network processor 12 and distributed interconnection

...manner that optimizes the system performance for a given load. At the

processing engine level, loads may be balanced between the multiple

processing modules of a given processing engine to further optimize the

system...request to start a video stream, a request for stored data, etc.

A request for services may include, for example, a request for to run

an application, to store a file...or storage capacity, etc.) may be adaptively or dynamically allocated or re-allocated according to service

level objectives , enabling proactive SLA management by preserving or

allocating more resources for a given customer when...

? b 411

```
26oct09 08:38:59 User276702 Session D262.3
                   3.245 DialUnits File349
           $15.90
              $1.62 6 Type(s) in Format 6 (UDF)
           $1.62 6 Types
   $17.52 Estimated cost File349
           $90.02 14.782 DialUnits File654
              $1.64 2 Type(s) in Format 3
              $0.90 3 Type(s) in Format 6 (UDF)
           $2.54 5 Types
   $92.56 Estimated cost File654
           OneSearch, 2 files, 18,028 DialUnits FileOS
    $2.40 INTERNET
  $112.48 Estimated cost this search
   $440.92 Estimated total session cost 126.886 DialUnits
File 411: DIALINDEX (R)
DIALINDEX (R)
```

(c) 2009 Dialog

*** DIALINDEX search results display in an abbreviated *** *** format unless you enter the SET DETAIL ON command. ***

? sf all

```
You have 514 files in your file list. (To see banners, use SHOW FILES command)
```

? s hitachi and (load () (balanc?? or distribut??)) and (service () level () (goal? or objective?)) not py>2003

Processing

Processing Processing

Processin

Processing Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing Processing

Processing

Processing

Processing

Processing

Processing

Processing Processing

Processing

Processing

Processing Processing

Processing

Processing Processing

Processing

Processing

Processing

Processing Processing

Processing

Processing

Processing Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing Processing

- i occosing

Processing Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing

Processing

riocessing

```
Processing
Your SELECT statement is:
   S HITACHI AND (LOAD () (BALANC?? OR DISTRIBUT??)) AND (SERVICE ()
LEVEL.
() (GOAL? OR OBJECTIVE?)) NOT PY>2003
            Items File
Processing
       Examined 50 files
       Examined 100 files
       Examined 150 files
Processing
Processing
Processing
       Examined 200 files
```

```
Processing
Processing
Processing
       Examined 250 files
       Examined 300 files
       Examined 350 files
       Examined 400 files
Processing
       Examined 450 files
       Examined 500 files
Processing
```

No files have one or more items; file list includes 514 files. One or more terms were invalid in 67 files.

9